



General

Guideline Title

Systemic therapy in men with metastatic castration-resistant prostate cancer: American Society of Clinical Oncology and Cancer Care Ontario clinical practice guideline.

Bibliographic Source(s)

Basch E, Loblaw DA, Oliver TK, Carducci M, Chen RC, Frame JN, Garrels K, Hotte S, Kattan MW, Raghavan D, Saad F, Taplin ME, Walker-Dilks C, Williams J, Winquist E, Bennett CL, Wootton T, Rumble RB, Dusetzina SB, Virgo KS. Systemic therapy in men with metastatic castration-resistant prostate cancer: American Society of Clinical Oncology and Cancer Care Ontario clinical practice guideline. *J Clin Oncol*. 2014 Oct 20;32(30):3436-48. [65 references] [PubMed](#)

Guideline Status

This is the current release of the guideline.

This guideline meets NGC's 2013 (revised) inclusion criteria.

Recommendations

Major Recommendations

Definitions for the rating of evidence (High, Intermediate, Low, Insufficient); types of recommendations (Evidence-based, Formal Consensus, Informal Consensus, No Recommendation); and strength of recommendations (Strong, Moderate, Weak) are provided at the end of the "Major Recommendations" field.

Recommendations

Androgen-Deprivation Therapy

Continuous androgen deprivation (pharmaceutical or surgical) should be continued indefinitely regardless of additional therapies.

(Benefit: moderate; harm: moderate; evidence strength: weak; recommendation strength: moderate)

Therapies in Addition to Androgen-Deprivation Therapy

Therapies with Demonstrated Survival and Quality-of-Life (QOL) Benefits

- Abiraterone acetate and prednisone should be offered.
(Benefit: moderate; harm: low; evidence strength: strong; recommendation strength: strong)

- Enzalutamide should be offered.
(Benefit: moderate; harm: low; evidence strength: strong; recommendation strength: strong)
- Radium-223 should be offered to men with bone metastases.
(Benefit: moderate; harm: low; evidence quality: strong; recommendation strength: strong)
- Docetaxel and prednisone should be offered.†
(Benefit: moderate; harm: moderate; evidence strength: strong; recommendation strength: moderate)

†Recent data suggest a substantial survival benefit when adding a limited course of docetaxel to androgen-deprivation therapy in the setting of newly diagnosed metastatic androgen-sensitive prostate cancer, primarily in men with a high burden of metastatic disease at presentation (visceral disease and/or >four bone metastatic lesions). The additive benefits or toxicities associated with subsequently retreating such patients with docetaxel in the castration-resistant setting are not known.

Therapies with Demonstrated Survival Benefit and Unclear QOL Benefit

- Sipuleucel-T may be offered to men who are asymptomatic or minimally symptomatic.
(Benefit: moderate; harm: low; evidence strength: moderate; recommendation strength: weak)
- Cabazitaxel and prednisone may be offered to men who experience progression with docetaxel
(Benefit: moderate; harm: moderate to high; evidence strength: strong; recommendation strength: moderate)

Therapies with QOL Benefit Without Demonstrated Survival Benefit

- Mitoxantrone plus prednisone may be offered.
(Benefit: low; harm: high; evidence strength: weak; recommendation strength: weak)

Therapies with Biologic Activity and Unknown Survival or QOL Benefit

- Antiandrogens (e.g., bicalutamide, flutamide, nilutamide) may be offered.
(Benefit: low; harm: low; evidence strength: weak; recommendation strength: weak)
- Ketoconazole may be offered.
(Benefit: low; harm: moderate; evidence strength: weak; recommendation strength: weak)
- Low-dose corticosteroid monotherapy may be offered.
(Benefit: low; harm: low; evidence strength: weak; recommendation strength: weak)

Therapies Without Demonstrated Survival or QOL Benefit‡

- Bevacizumab should not be offered.
(Benefit: none; harm: high; evidence strength: moderate; recommendation strength: strong)
- Estramustine should not be offered.
(Benefit: none; harm: high; evidence strength: moderate; recommendation strength: strong)
- Sunitinib should not be offered.
(Benefit: none; harm: high; evidence strength: moderate; recommendation strength: strong)

‡Drug products are listed that have obtained regulatory approval and market availability for other indications. Products with negative phase III clinical trial evidence are not listed if they are not approved or available.

Palliative Care Services

Palliative care should be offered to all patients, particularly to those exhibiting symptoms or QOL decrements, regardless of treatment type.

(Benefit: moderate; harm: none; evidence strength: moderate; recommendation strength: strong)

Definitions:

Guide for Rating Strength of Evidence

Rating for Strength of Evidence	Definition
High	High confidence that the available evidence reflects the true magnitude and direction of the net effect (i.e., balance of benefits versus harms) and that further research is very unlikely to change either the magnitude or direction of this net effect.
Intermediate	Moderate confidence that the available evidence reflects the true magnitude and direction of the net effect. Further research is unlikely to alter the direction of the net effect; however, it might alter the magnitude of the net effect.
Low	Low confidence that the available evidence reflects the true magnitude and direction of the net effect. Further research may change either the magnitude and/or direction this net effect.
Insufficient	Evidence is insufficient to discern the true magnitude and direction of the net effect. Further research may better inform the topic. The use of the consensus opinion of experts is reasonable to inform outcomes related to the topic.

Guide for Types of Recommendations

Type of Recommendation	Definition
Evidence based	There was sufficient evidence from published studies to inform a recommendation to guide clinical practice.
Formal consensus	The available evidence was deemed insufficient to inform a recommendation to guide clinical practice. Therefore, the Expert Panel used a formal consensus process to reach this recommendation, which is considered the best current guidance for practice. The Panel may choose to provide a rating for the strength of the recommendation (i.e., "strong," "moderate," or "weak"). The results of the formal consensus process are summarized in the guideline and reported in the Data Supplement (see the "Availability of Companion Documents" field).
Informal consensus	The available evidence was deemed insufficient to inform a recommendation to guide clinical practice. The recommendation is considered the best current guidance for practice, based on informal consensus of the Expert Panel. The Panel agreed that a formal consensus process was not necessary for reasons described in the literature review and discussion. The Panel may choose to provide a rating for the strength of the recommendation (i.e., "strong," "moderate," or "weak").
No recommendation	There is insufficient evidence, confidence, or agreement to provide a recommendation to guide clinical practice at this time. The Panel deemed the available evidence as insufficient and concluded it was unlikely that a formal consensus process would achieve the level of agreement needed for a recommendation.

Guide for Strength of Recommendations

Rating for Strength of Recommendation	Definition
Strong	There is high confidence that the recommendation reflects best practice. This is based on (1) strong evidence for a true net effect (e.g., benefits exceed harms); (2) consistent results, with no or minor exceptions; (3) minor or no concerns about study quality; and/or (4) the extent of panelists' agreement. Other compelling considerations (discussed in the guideline's literature review and analyses) may also warrant a strong recommendation.
Moderate	There is moderate confidence that the recommendation reflects best practice. This is based on (1) good evidence for a true net effect (e.g., benefits exceed harms); (2) consistent results, with minor and/or few exceptions; (3) minor and/or few concerns about study quality; and/or (4) the extent of panelists' agreement. Other compelling considerations (discussed in the guideline's literature review and analyses) may also warrant a moderate recommendation.
Weak	There is some confidence that the recommendation offers the best current guidance for practice. This is based on (1) limited evidence for a true net effect (e.g., benefits exceed harms); (2) consistent results, but with important exceptions; (3) concerns about study quality; and/or (4) the extent of panelists' agreement. Other considerations (discussed in the

Rating for Definition	guideline's literature review and analyses) may also warrant a weak recommendation.
Strength of Recommendation	

Clinical Algorithm(s)

None provided

Scope

Disease/Condition(s)

Metastatic castration-resistant prostate cancer (CRPC)

Note: Topics not specifically covered in this guideline include management of patients with androgen-sensitive prostate cancer, management of prostate cancer recurrence based solely on detection of serum prostate-specific antigen (PSA) without radiographic or pathologic evidence of metastases (i.e., biochemical progression), and bone health in CRPC.

Guideline Category

Management

Treatment

Clinical Specialty

Oncology

Radiation Oncology

Urology

Intended Users

Advanced Practice Nurses

Allied Health Personnel

Nurses

Physician Assistants

Physicians

Guideline Objective(s)

To provide treatment recommendations for men with metastatic castration-resistant prostate cancer (CRPC)

Target Population

Men with metastatic castration-resistant prostate cancer

Interventions and Practices Considered

1. Androgen deprivation
2. Additional therapies
 - Abiraterone acetate and prednisone
 - Enzalutamide
 - Radium-223 (for men with bone metastases)
 - Docetaxel and prednisone
 - Sipuleucel-T
 - Cabazitaxel and prednisone
 - Mitoxantrone and prednisone
 - Antiandrogens
 - Ketoconazole
 - Low-dose corticosteroid monotherapy
3. Palliative care

Note: The following interventions were considered but not recommended:

Bevacizumab
Estramustine
Sunitinib

Major Outcomes Considered

- Overall survival
- Progression-free survival
- Time-to-progression
- Time-to-treatment failure
- Objective tumor response
- Prostate-specific antigen (PSA) response
- Palliative or symptomatic response
- Quality of life (QOL)
- Adverse events

Methodology

Methods Used to Collect/Select the Evidence

Hand-searches of Published Literature (Primary Sources)

Hand-searches of Published Literature (Secondary Sources)

Searches of Electronic Databases

Description of Methods Used to Collect/Select the Evidence

Literature Review

American Society of Clinical Oncology (ASCO) and Cancer Care Ontario (CCO) guidelines are based on systematic reviews of the literature. A protocol for each systematic review defines parameters for a targeted literature search. Additional parameters include relevant study designs, literature sources, types of reports, and prespecified inclusion and exclusion criteria for identified literature.

Literature Search Strategy

The literature search for the CCO review (see the "Availability of Companion Documents" field) was performed using the MEDLINE (Ovid MEDLINE[R] In-Process & Other Non-Indexed Citations and Ovid MEDLINE[R]) and EMBASE databases (2003 to June 2012). The

Cochrane Library was searched for systematic reviews and technology assessments. The annual meeting proceedings of ASCO and the American Urological Association were searched for relevant abstracts in from 2009 to 2012.

For this clinical practice guideline, the literature search to June 2012 and results of the systematic review conducted by CCO were considered to be of high quality and currency to be endorsed for use by the guideline expert panel. An updated search of the MEDLINE database was conducted to June 2014 to search for any additional randomized controlled trials (RCTs) that could inform recommendations. The literature search will be replicated for periodic updates of the guideline. Additions to this guideline were triggered by publications and meeting presentations of phase III clinical trials through June 2014.

Study Selection Criteria

Articles were selected for inclusion in the CCO systematic review if they:

- Were RCTs or evidence synthesis products based on RCTs
- Included men with metastatic castration-resistant prostate cancer (CRPC)
- Compared systemic therapy, alone or in combination with other agents, versus placebo or other drug regimens
- Were published English-language reports

Articles were excluded from the systematic review if they involved only androgen-deprivation therapy, bone targeted agents, or radionuclides. Trials were required to have ≥50 patients per study arm, and in mixed study populations, 90% of men were required to have metastases.

See the methodology supplement and data supplement (see the "Availability of Companion Documents" field) for further information on the literature search and results.

Number of Source Documents

A total of 26 randomized controlled trials (RCTs) informed this clinical practice guideline.

Methods Used to Assess the Quality and Strength of the Evidence

Weighting According to a Rating Scheme (Scheme Given)

Rating Scheme for the Strength of the Evidence

Guide for Rating Strength of Evidence

Rating for Strength of Evidence	Definition
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Intermediate	Moderate confidence that the available evidence reflects the true magnitude and direction of the net effect. Further research is unlikely to alter the direction of the net effect; however, it might alter the magnitude of the net effect.
Low	Low confidence that the available evidence reflects the true magnitude and direction of the net effect. Further research may change either the magnitude and/or direction this net effect.
Insufficient	Evidence is insufficient to discern the true magnitude and direction of the net effect. Further research may better inform the topic. The use of the consensus opinion of experts is reasonable to inform outcomes related to the topic.

Methods Used to Analyze the Evidence

Meta-Analysis

Description of the Methods Used to Analyze the Evidence

Data Extraction

The Cancer Care Ontario (CCO) review (see the "Availability of Companion Documents" field) reported that primary outcome measures of interest included overall survival, progression-free survival, time-to-progression, time-to-treatment failure, objective tumor response, prostate-specific antigen (PSA) response, palliative or symptomatic response, quality of life, and/or adverse events. According to the process used at CCO, abstracts were reviewed and papers were deemed appropriate for full text review and data extraction by one reviewer. These data were also reviewed by the lead and corresponding authors. Data were extracted by one reviewer and subsequently checked for accuracy through an audit of the data. Disagreements were resolved through discussion and consultation with the lead authors if necessary.

Study Quality Assessment and Limitations of Literature: CCO Review

In the CCO review, study quality was formally assessed and summarized by one reviewer for the randomized controlled trials (RCTs) identified. In that review, design aspects related to individual study quality were generally assessed as moderate to high quality, with factors such as blinding, allocation concealment, placebo control, intention to treat, and funding sources, generally indicating a relatively low risk of bias for most of the identified trials (see Table 2 in the original guideline document). Since the time of that quality appraisal, two of the trials have published their findings, with additional details reported around quality elements. Hence, the quality appraisal from the CCO review is slightly more conservative in its estimation of potential biases associated with the body of evidence.

Several factors related to increased potential for bias for the overall body of evidence to inform recommendations were also reported. Seven of the trials were phase II studies, seven trials were terminated early, three trials offered crossover after preplanned interim analyses, and four trials were reported as conference proceedings (see Table 1 in the original guideline document). Primary outcomes varied across the trials, and in the majority of cases, studies were not directly comparable, because different treatments and regimens were used at different time points in the patient treatment trajectory.

One included phase III double-blind RCT was published subsequent to the CCO quality appraisal. In that trial, 921 patients were randomly assigned at a ratio of two to one to radium-223 (²²³Ra) or placebo. That trial was terminated for efficacy as part of a preplanned interim analysis. Using the same quality metrics reported in the CCO review, that trial was not considered to be at high risk of potential bias.

Study Quality Assessment: American Society of Clinical Oncology (ASCO) Review

Study quality was formally assessed for the studies identified by both CCO and ASCO. For the ASCO quality assessment, design aspects related to the individual study quality were assessed by one reviewer and included factors such as blinding, allocation concealment, placebo control, intention to treat, funding sources, etc. The risk of bias is assessed as "low," "intermediate," or "high" for most of the identified evidence.

Methods Used to Formulate the Recommendations

Expert Consensus

Description of Methods Used to Formulate the Recommendations

Panel Composition

The American Society of Clinical Oncology (ASCO) Clinical Practice Guidelines Committee and Cancer Care Ontario (CCO) Program in Evidence-Based Care convened an expert panel with multidisciplinary representation in medical oncology, urologic oncology, radiation oncology, community oncology, patient advocacy, health services, implementation research, and guideline methodology. Members of the expert panel are listed in Appendix Table A1 of the original guideline document.

Guideline Development Process

The expert panel met on several occasions and corresponded frequently through e-mail; work on the guideline was completed primarily through

the writing group, along with ASCO staff. The purpose of the panel meetings was for members to contribute content, provide critical review, and finalize the guideline recommendations, including an assessment of benefits and harms associated with treatments based on consideration of the evidence. All members of the expert panel participated in preparation of the draft guideline document, which was then disseminated for external review and submitted to *Journal of Clinical Oncology (JCO)* for peer review.

Development of Recommendations

The guideline recommendations were crafted, in part, using the GuideLines Into DEcision Support (GLIDES) methodology and accompanying BRIDGE-Wiz software[™]. This method helps guideline panels systematically develop clear, translatable, and implementable recommendations using natural language, based on the evidence and assessment of its quality to increase usability for end users. The process incorporates distilling the actions involved, identifying who will carry them out, to whom, under what circumstances, and clarifying if and how end users can carry out the actions consistently. This process helps the Panel focus the discussion, avoid using unnecessary and/or ambiguous language, and clearly state its intentions.

Rating Scheme for the Strength of the Recommendations

Guide for Types of Recommendations

Type of Recommendation	Definition
Evidence based	There was sufficient evidence from published studies to inform a recommendation to guide clinical practice.
Formal consensus	The available evidence was deemed insufficient to inform a recommendation to guide clinical practice. Therefore, the Expert Panel used a formal consensus process to reach this recommendation, which is considered the best current guidance for practice. The Panel may choose to provide a rating for the strength of the recommendation (i.e., "strong," "moderate," or "weak"). The results of the formal consensus process are summarized in the guideline and reported in the Data Supplement (see the "Availability of Companion Documents" field).
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No recommendation	There is insufficient evidence, confidence, or agreement to provide a recommendation to guide clinical practice at this time. The Panel deemed the available evidence as insufficient and concluded it was unlikely that a formal consensus process would achieve the level of agreement needed for a recommendation.

Guide for Strength of Recommendations

Rating for Strength of Recommendation	Definition
Strong	There is high confidence that the recommendation reflects best practice. This is based on (1) strong evidence for a true net effect (e.g., benefits exceed harms); (2) consistent results, with no or minor exceptions; (3) minor or no concerns about study quality; and/or (4) the extent of panelists' agreement. Other compelling considerations (discussed in the guideline's literature review and analyses) may also warrant a strong recommendation.
Moderate	There is moderate confidence that the recommendation reflects best practice. This is based on (1) good evidence for a true net effect (e.g., benefits exceed harms); (2) consistent results, with minor and/or few exceptions; (3) minor and/or few concerns about study quality; and/or (4) the extent of panelists' agreement. Other compelling considerations (discussed in the guideline's literature review and analyses) may also warrant a moderate recommendation.
Weak	There is some confidence that the recommendation offers the best current guidance for practice. This is based on (1)

Rating for Strength of Recommendation	limited evidence for a true net effect (e.g., benefits exceed harms); (2) consistent results, but with important exceptions; (3) concerns about study quality; and/or (4) the extent of panelists' agreement. Other considerations (discussed in the guideline's literature review and analyses) may also warrant a weak recommendation.
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Cost Analysis

A formal cost analysis was not performed and published cost analyses were not reviewed.

Method of Guideline Validation

External Peer Review

Internal Peer Review

Description of Method of Guideline Validation

All members of the expert panel participated in preparation of the draft guideline document, which was then disseminated for external review and submitted to *Journal of Clinical Oncology (JCO)* for peer review. All American Society of Clinical Oncology (ASCO) guidelines are reviewed and approved by the ASCO Clinical Practice Guideline Committee on behalf of the ASCO Board before publication. All Cancer Care Ontario (CCO) guidelines are reviewed and approved by the CCO Report Approval Panel and a topic-specific disease site group (in this instance, the CCO Genitourinary Disease Site Group).

The Clinical Practice Guideline Committee approved this guideline on April 26, 2013.

Evidence Supporting the Recommendations

Type of Evidence Supporting the Recommendations

The type of supporting evidence is identified and graded for each recommendation (see the "Major Recommendations" field).

Benefits/Harms of Implementing the Guideline Recommendations

Potential Benefits

Appropriate systemic therapy in men for patients with metastatic castration-resistant prostate cancer (CRPC)

Potential Harms

- Patients should be fully informed about the extent of potential harm and cost of treatment before making decisions. Many patients misunderstand the goals of care in the setting of metastatic disease to be curative rather than palliative. This may lead to decisions to accept excess toxicity or cost based on incorrect assumptions.
- See the "Trial Results" section for information concerning adverse events of chemotherapy-containing regimens.
- Refer to the "Major Recommendations" field for ratings of harms associated with each recommendation.

Qualifying Statements

Qualifying Statements

- Clinicians are advised to review the published regimens discussed in this guideline for their use in appropriate patient populations and for applicable dose selections/modifications, available from the product labels.
- There is insufficient published evidence to recommend specific sequencing of these therapies or combinations of these therapies, except as otherwise noted.
- The distinction made in some clinical trials between pre- and postdocetaxel treatment contexts should not play a role in selecting therapies for individual patients, unless otherwise noted.
- Patients may place a higher importance on quality of life (QOL) rather than length of life. It is essential to understand individual patient values and preferences for appropriate treatment decision making. Many patients with incurable metastatic disease misperceive the goals of care to be curative. Clear communication about goals as well as potential benefits and harms of care should be prioritized.
- Cost and availability considerations may reasonably influence treatment decisions. There is wide variation in the financial burden individual patients face for various therapies, and this potential barrier or hardship should be openly discussed with patients.
- Most phase III clinical trials have included patients with good baseline performance status. The choice of for patients with diminished performance status is not clearly informed by existing evidence in most cases.
- American Society of Clinical Oncology (ASCO) Clinical Practice Guidelines and other guidance published herein are provided by ASCO to assist providers in clinical decision making. The information herein should not be relied on as being complete or accurate, nor should it be considered as inclusive of all proper treatments or methods of care or as a statement of the standard of care. With the rapid development of scientific knowledge, new evidence may emerge between the time information is developed and when it is published or read. The information is not continually updated and may not reflect the most recent evidence. The information addresses only the topics specifically identified herein and is not applicable to other interventions, diseases, or stages of disease. This information does not mandate any particular course of medical care. Furthermore, the information is not intended to substitute for the independent professional judgment of the treating provider, because the information does not account for individual variation among patients. Recommendations reflect high, moderate, or low confidence that the recommendation reflects the net effect of a given course of action. Use of words like must, must not, should, and should not indicates that a course of action is recommended or not recommended for either most or many patients, but there is latitude for the treating physician to select other courses of action in individual cases. In all cases, the selected course of action should be considered by the treating provider in the context of treating the individual patient. Use of the information is voluntary. ASCO provides this information on an as-is basis and makes no warranty, express or implied, regarding the information. ASCO specifically disclaims any warranties of merchantability or fitness for a particular use or purpose. ASCO assumes no responsibility for any injury or damage to persons or property arising out of or related to any use of this information or for any errors or omissions.
- Opinions expressed in this article should not be interpreted as the official positions of any United States or Canadian governmental agency, including the National Cancer Institute, National Institutes of Health U.S. Food and Drug Administration, or U.S. Department of Health and Human Services.

Implementation of the Guideline

Description of Implementation Strategy

American Society of Clinical Oncology (ASCO) guidelines are developed for implementation across health settings. Barriers to implementation include the need to increase awareness of the guideline recommendations among front-line practitioners and survivors of cancer and caregivers, as well as the need to provide adequate services in the face of limited resources. The guideline Bottom Line Box was designed to facilitate implementation of recommendations. This guideline will be distributed widely throughout the ASCO Practice Guideline Implementation Network. ASCO guidelines are posted on the ASCO Web site and most often published in the *Journal of Clinical Oncology (JCO)* and *Journal of Oncology Practice*. The Appendix in the original guideline document provides results of a questionnaire for guideline implementability review.

For additional information on the ASCO implementation strategy, please see the [ASCO Web site](#) .

Implementation Tools

Patient Resources

Quick Reference Guides/Physician Guides

Slide Presentation

Institute of Medicine (IOM) National Healthcare Quality Report Categories

IOM Care Need

End of Life Care

Getting Better

Living with Illness

IOM Domain

Effectiveness

Patient-centeredness

Identifying Information and Availability

Bibliographic Source(s)

Basch E, Loblaw DA, Oliver TK, Carducci M, Chen RC, Frame JN, Garrels K, Hotte S, Kattan MW, Raghavan D, Saad F, Taplin ME, Walker-Dilks C, Williams J, Winquist E, Bennett CL, Wootton T, Rumble RB, Dusetzina SB, Virgo KS. Systemic therapy in men with metastatic castration-resistant prostate cancer: American Society of Clinical Oncology and Cancer Care Ontario clinical practice guideline. *J Clin Oncol*. 2014 Oct 20;32(30):3436-48. [65 references] [PubMed](#)

Adaptation

Not applicable: The guideline was not adapted from another source.

Date Released

2014 Oct 20

Guideline Developer(s)

American Society of Clinical Oncology - Medical Specialty Society

Cancer Care Ontario - State/Local Government Agency [Non-U.S.]

Source(s) of Funding

American Society of Clinical Oncology

Guideline Committee

American Society of Clinical Oncology (ASCO)/Cancer Care Ontario (CCO) Castration-Resistant Prostate Cancer (CRPC) Expert Panel

Composition of Group That Authored the Guideline

Committee Members: Ethan Basch, MD (*Panel Chair, Writing Group Member*), University of North Carolina, Chapel Hill, NC; Andrew Loblaw, MD (*Writing Group Member*), Odette Cancer Centre, Sunnybrook Health Sciences Centre, Toronto, Ontario, Canada; Charles Bennett, MD, University of South Carolina, Columbia, SC; Michael Carducci, MD, Johns Hopkins University, Baltimore, MD; Ronald C. Chen, MD, University of North Carolina, Chapel Hill, NC; James N. Frame, MD, Charleston Area Medical Center Health Systems, Charleston, WV; Sebastian Hotte, MD, McMaster University, Hamilton, Ontario, Canada; Kristina Garrels, MD, Private practice, Fargo, ND; Michael W. Kattan, MBA, PhD, Cleveland Clinic, Cleveland, OH; Derek Raghavan, MD, Carolinas Health Care/Levine Cancer Institute, Charlotte, NC; Mary-Ellen Taplin, MD, Dana-Farber Cancer Institute, Boston, MA; Fred Saad, MD, University of Montreal, Montreal, Quebec, Canada; Katherine S. Virgo, PhD, Emory University, Atlanta, GA; James Williams, MS, SPHR, Pennsylvania Prostate Cancer Coalition, Camp Hill, PA; Eric Winquist, MD, London Health Sciences Centre, London, Ontario, Canada; Ted Wootton, Patient representative, Toronto, Ontario, Canada

Financial Disclosures/Conflicts of Interest

The expert panel was assembled in accordance with the American Society of Clinical Oncology (ASCO) Conflict of Interest Management Procedures for Clinical Practice Guidelines. Members of the panel completed the ASCO disclosure form, which requires disclosure of financial and other interests that are relevant to the subject matter of the guideline, including relationships with commercial entities that are reasonably likely to experience direct regulatory or commercial impact as a result of promulgation of the guideline. Categories for disclosure include employment relationships, consulting arrangements, stock ownership, honoraria, research funding, and expert testimony. In accordance with these procedures, the majority of the members of the panel did not disclose any such relationships. The Methodology Supplement provides full guideline disclaimers from Cancer Care Ontario (CCO).

Although all authors completed the disclosure declaration, the following author(s) and/or an author's immediate family member(s) indicated a financial or other interest that is relevant to the subject matter under consideration in this article. Certain relationships marked with a "U" are those for which no compensation was received; those relationships marked with a "C" were compensated. For a detailed description of the disclosure categories, or for more information about ASCO's conflict of interest policy, please refer to the Author Disclosure Declaration and the Disclosures of Potential Conflicts of Interest section in Information for Contributors.

Employment or Leadership Position: None Consultant or Advisory Role: Ethan Basch, Exelixis (U); D. Andrew Loblaw, AstraZeneca (C), Roche (C), sanofi-aventis (C), GlaxoSmithKline (C), Merck (C), Amgen (C), Astellas Pharma (C), Janssen (C), GE Health Care (C); Michael Carducci, sanofi-aventis (C), Medivation (C), Astellas Pharma (C), Amgen (C); Sebastien Hotte, Janssen (C), Astellas Pharma (C); Michael Kattan, Merck (C), GlaxoSmithKline (C); Derek Raghavan, sanofi-aventis (C); Fred Saad, sanofi-aventis (C), Astellas Pharma (C), Janssen (C), Bayer HealthCare Pharmaceuticals (C), Amgen (C), Abbvie (C); Mary-Ellen Taplin, Dendreon (C), Medivation (C), sanofi-aventis (C), Janssen (C), Tokai (C), Bayer HealthCare Pharmaceuticals (C) Stock Ownership: None Honoraria: D. Andrew Loblaw, AstraZeneca, sanofi-aventis, Amgen, Elekta, GE Health Care, Janssen, Paladin; Sebastien Hotte, Janssen, Astellas Pharma; Fred Saad, sanofi-aventis, Janssen, Astellas Pharma, Bayer HealthCare Pharmaceuticals, Amgen, Abbvie; Mary-Ellen Taplin, Cowan, Guide Point Global Research Funding: D. Andrew Loblaw, sanofi-aventis, Paladin; Michael Kattan, Dendreon; Fred Saad, Medivation, sanofi-aventis, Astellas Pharma, Janssen, Bayer HealthCare Pharmaceuticals, Oncogenex; Mary-Ellen Taplin, Genentech, Medivation, Janssen Expert Testimony: None Patents, Royalties, and Licenses: James N. Frame, royalties as co-editor of *Hematology Oncology Therapy* by McGraw Hill Other Remuneration: D. Andrew Loblaw, Janssen, Paladin

Guideline Status

This is the current release of the guideline.

This guideline meets NGC's 2013 (revised) inclusion criteria.

Guideline Availability

Electronic copies: Available from the [American Society of Clinical Oncology Web site](#) .

Print copies: Available from American Society of Clinical Oncology, Cancer Policy and Clinical Affairs, 2318 Mill Rd, Suite 800, Alexandria, VA 22314; E-mail: guidelines@asco.org.

Availability of Companion Documents

The following are available:

- Systemic therapy in men with metastatic castration-resistant prostate cancer. (Evidence-based series; no. 3-15). Systematic evidence review. Toronto (ON): Cancer Care Ontario (CCO); 2014 Sep 8. 86 p. Electronic copies: Available from the [Cancer Care Ontario \(CCO\) Web site](#) .
- Systemic therapy in men with metastatic castration-resistant prostate cancer (CRPC): American Society of Clinical Oncology (ASCO) and Cancer Care Ontario (CCO) clinical practice guideline. Methodology supplement. Alexandria (VA): American Society of Clinical Oncology; 2014. 8 p. Electronic copies: Available from the [American Society of Clinical Oncology \(ASCO\) Web site](#) .
- Systemic therapy in men with metastatic castration-resistant prostate cancer (CRPC): American Society of Clinical Oncology and Cancer Care Ontario clinical practice guideline. Data supplement. Alexandria (VA): American Society of Clinical Oncology; 2014. 6 p. Electronic copies: Available from the [ASCO Web site](#) .
- Systemic therapy in men with metastatic castration-resistant prostate cancer. Slide set. Alexandria (VA): American Society of Clinical Oncology; 2014. Electronic copies: Available in [PDF](#) and [PowerPoint](#) from the ASCO Web site.
- Systemic therapy in men with metastatic castration-resistant prostate cancer (CRPC): American Society of Clinical Oncology and Cancer Care Ontario clinical practice guideline. Summary of recommendations. Alexandria (VA): American Society of Clinical Oncology; 2014. 4 p. Electronic copies: Available from the [ASCO Web site](#) .

Patient Resources

The following is available:

- Treatment of metastatic castration-resistant prostate cancer. Patient information. 2014. Electronic copies: Available from the [Cancer.Net web site](#) .

Please note: This patient information is intended to provide health professionals with information to share with their patients to help them better understand their health and their diagnosed disorders. By providing access to this patient information, it is not the intention of NGC to provide specific medical advice for particular patients. Rather we urge patients and their representatives to review this material and then to consult with a licensed health professional for evaluation of treatment options suitable for them as well as for diagnosis and answers to their personal medical questions. This patient information has been derived and prepared from a guideline for health care professionals included on NGC by the authors or publishers of that original guideline. The patient information is not reviewed by NGC to establish whether or not it accurately reflects the original guideline's content.

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